

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) Lock cylinder consisting of a cylinder housing and a cylinder core, which is supported rotatably in the housing,

-- a key with a defined longitudinal profile being assigned to the core,

-- with a group of diametric shafts arranged in a row in the axial direction of the cylinder core,

-- which hold plate-shaped tumblers, the longitudinal edges of which are free to slide longitudinally along guide surfaces of the shafts, the tumblers also being spring-loaded in one of the two directions of their movement;

-- where each tumbler has a control edge in correspondence with the longitudinal profile of the key, each control edge being located at a defined height;

-- with a radial opening in the cylinder core and an insert, which is capable of being inserted into the opening;

-- an outer end of which never projects beyond an external contour of the cylinder core after insertion of the insert into the radial opening, the insert being fixed in position in the opening, whereas an inner end always engages in a cutout in a facing edge of the longitudinal plate edge of each of the tumblers;

-- as a result of which each of the tumblers is secured in the cylinder core before the core is installed in the housing thereby preventing loss of the tumblers;

wherein

-- the insert consists of a non-displaceably positioned comb-shaped body having cogs ~~teeth~~ that extend perpendicularly from the comb-shaped body and with radial teeth that are an extension of the cogs ~~teeth~~ and in a common plane, the inner ends of which have a profile with at least one pair of oppositely-facing flanks;

-- whereas the cutouts in the tumblers have at least one pair of opposing flanks, which are in different positions on each of the tumblers which have their control edges at different heights; in that

-- the at least one pair of oppositely-facing flanks and the at least one pair of opposing flanks are arranged in such a way that, after the comb has been inserted and the key has been

withdrawn, the control edges of at least two tumblers are at the same height, which thus conceals the actual position of the control edges, wherein the tumblers are arranged in the common plane with the cogs teeth and the radial ~~comb~~ teeth extensions,

-- whereby, in the rest position of each of the tumblers, only one of the flanks of a flank pair of the at least one pair of oppositely-facing flanks rests against one of the opposing flanks of the at least one pair of opposing flanks,

-- whereby, in an actuated position, after maximum displacement of the tumblers by a lock-picking tool, the other flank of the flank pair meets the other opposing flank.

2. (Previously presented) Lock cylinder according to Claim 1, wherein a set of different combs is assigned to a plurality of similar cylinder cores, the teeth of the combs being provided with different profiles.

3. (Previously presented) Lock cylinder according to Claim 1, wherein a set of different combs is assigned to a plurality of similar cylinder cores,

-- where the teeth of the combs have similar profiles and are arranged in either a normal or reversed position as desired and/or in different sequences on the comb;

-- where, in order to increase the number of variations of the lock cylinder, one of these different combs is selected and inserted into one of the cylinder cores of uniform type.

4. (Previously presented) Lock cylinder according to Claim 1, wherein the profiles of all the teeth on the comb are of similar design.

5. (Previously presented) Lock cylinder according to Claim 1, wherein the at least one pair of opposing flanks of the cutouts of one tumbler are offset in a vertical direction from at least one pair of opposing flanks of another tumbler when the tumblers have control edges in different positions.

6. (Previously presented) Lock cylinder according to Claim 1, wherein the inner ends of the teeth of the comb are convexly profiled in the radial direction with at least two pairs of flanks, which are arranged in sequence in the direction of longitudinal movement and are at different heights; in that

-- the cutouts in each of the tumblers are concavely profiled in the radial direction and have sections which form at least two pairs of opposing flanks, which are arranged in

sequence in the direction of longitudinal movement and are offset from each other in the height direction.

7. (Previously presented) Lock cylinder according to Claim 1, wherein all of the teeth have essentially the same convex profile at their inner ends, they are positioned in similar openings of the cylinder core in two different laterally reversed orientations, one orientation defining normal teeth and another orientation defining reversed teeth; and in that

-- the at least one pair of oppositely-facing flanks of each of the normal teeth is laterally reversed with respect to those of the reversed teeth.

8. (Previously presented) Lock cylinder according to Claim 7, wherein the normal tooth of the inserted comb is laterally reversed with respect to a transverse plane, which passes diametrically through the cylinder core in the area of the axis and extends transversely to the spring-loading of the tumblers.

9. (Previously presented) Lock cylinder according to Claim 1, wherein a maximum point of the tooth profile positioned in the cylinder core lies essentially on a transverse plane of the cylinder core.

10. (Previously presented) Lock cylinder according to Claim 9, wherein a tooth of the comb has two pairs of flanks, namely, an inner pair, which is closer to the transverse plane of the cylinder core, and an outer pair, which is farther away from the transverse plane.

11. (Previously presented) Lock cylinder according to Claim 10, wherein the flanks of inner flank pair are symmetrical to the transverse plane of the cylinder core,

-- whereas the flanks of the outer flank pair are asymmetric with respect to the transverse plane.

12. (Previously presented) Lock cylinder according to Claim 10, wherein the flanks of the inner flank pair are parallel to the transverse plane, whereas

-- the flanks of the outer flank pair are positioned at an angle to the transverse plane.

13. (Previously presented) Lock cylinder according to Claim 12, wherein the two outer flanks are angled as mirror images of each other.

14. (Previously presented) Lock cylinder according to Claim 13, wherein a length of one of the outer flanks is different from a length of the other outer flank.

15. (Previously presented) Lock cylinder according to Claim 1, wherein maximum points of the teeth of the inserted comb are located a certain distance away in the height direction from a transverse plane of the cylinder core.

16. (Previously presented) Lock cylinder according to Claim 15, wherein a convex profile serving to control the tumbler is positioned at one end of the tooth.

17. (Previously presented) Lock cylinder according to Claim 15, wherein a convex profile of a normal tooth is an exact mirror image of a profile of a reversed tooth in a direction of longitudinal movement of the tumblers.

18. (Previously presented) Lock cylinder according to Claim 15, wherein a convex profile of the teeth has only one pair of flanks, one of the flanks of the pair has a form different from that of the other flank of the pair.

19. (Previously presented) Lock cylinder according to Claim 18, wherein one of the flanks of the convex profile of the teeth is essentially parallel to the transverse plane of the cylinder core, whereas the other flank of the convex profile of the teeth forms an angle with that plane.

20. (Previously presented) Lock cylinder according to Claim 15, wherein normal teeth and reversed teeth are arranged in an alternating sequence in successive shafts of the cylinder core.

21. (Previously presented) Lock cylinder according to Claim 20, wherein the comb, has an even number of teeth; and in that

-- the comb can be inserted into the cylinder core with either one of two different orientations, one the reverse of the other,

-- where the comb begins with a normal tooth when inserted with one of the two orientations, whereas a reversed tooth is at a front of the comb when the comb is inserted with the other orientation.

22. (Previously presented) Lock cylinder according to Claim 1, wherein cutouts in the individual tumblers are of similar



design, and they have different dimensions as a function of a height position of the control edge.

23. (Previously presented) Lock cylinder according to Claim 22, wherein the cutouts are designed with two steps and thus produce two pairs of opposing flanks at different depths,

-- namely, an inner pair of opposing flanks on a lower step of the cutout and an outer pair on an upper step.

24. (Previously presented) Lock cylinder according to Claim 23, wherein the cutout has a separating web, and in that

-- as a function of the height position of the control edge of an associated tumbler, lengths or positions of the cutouts and/or positions of webs in the cutouts and/or lengths of the webs are different.

25. (Previously presented) Lock cylinder according to Claim 24, wherein the separating web is positioned essentially at a longitudinal midpoint of the cutout.

26. (Previously presented) Lock cylinder according to Claim 24, wherein the cutouts have two pairs of additional opposing flanks,

-- where one of the pairs of additional opposing flanks is formed by two terminal edges of the separating web, which form inner opposing flanks, which face away from each other;

-- whereas the other pair of additional opposing flanks is formed by two inner edges at an outer end of the cutout, which form outer opposing flanks, which face each other.

27. (Previously presented) Lock cylinder according to Claim 26, wherein the inner opposing flanks have a design different from that of the outer opposing flanks.

28. (Previously presented) Lock cylinder according to Claim 27, wherein the inner opposing flanks are essentially parallel to the transverse plane of the cylinder core, whereas the outer opposing flanks are at a certain angle to the transverse plane.

29. (Previously presented) Lock cylinder according to Claim 28, wherein the angles of the two outer opposing flanks are essentially exact mirror images of each other.